

REMARKS

Favorable reconsideration of this application, in light of the present amendment and following discussion, is respectfully requested.

Claims 1-32 are pending; Claims 1 and 17 have been amended; and no claims have been newly added or canceled herewith. Support for the amendment to Claims 1 and 17 may be found, for example, at page 11, lines 15-19 of the specification. It is therefore respectfully submitted that no new matter has been added by this amendment.

In the outstanding Office Action, Claims 1-3, 13, 17-19, and 32 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hicks (U.S. Pat. No. 2,961,043); Claims 1-3, 9, 13-19, 25-28, and 32 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hicks in view of Stevens (U.S. Pat. No. 2,590,221); Claims 4 and 20 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hicks alone or in combination with Stevens, in view of Kelley et al. (U.S. Pat. No. 5,356,518, hereafter Kelley); Claims 5 and 21 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hicks, alone or in combination with Stevens, in view of Utsul et al. (EP 562,590 A1, hereafter Utsul); Claims 6-8 and 22-24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hicks, alone or in combination with Stevens, and in view of Kakemura et al. (U.S. Pat. No. 5,968,616, hereafter Kakemura); Claims 11 and 30 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hicks, alone or in combination with Stevens, and further in view of Brennan (U.S. Pat. No. 4,014,737); Claims 10 and 29 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hicks, alone or in combination with Stevens, and in view of Mitchell et al. (U.S. Pat. No. 6,010,595, hereafter Mitchell); and Claims 12 and 31 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hicks in view of Mitchell, and further in view of Brennan.

Regarding the rejection of Claims 1-3, 13, 17-19, and 32 under 35 U.S.C. § 103(a) as unpatentable over Hicks, that rejection is traversed. Claims 1 and 17 have been amended to

recite that a top edge of the opening portion has a smoothness having a center-line average roughness less than or equal to about 50 μm and a maximum height of about 500 μm . As noted above, the claimed roughness and height have particular advantages.

As described in the specification at page 11, it is preferable for the top edge 16 of the opening portion 11 to have a smooth surface to secure improved sealability where it is sealed with a sealing paper or the like. The top edge 16 secures sufficient sealability with such a smoothness as to have a center-line average roughness of approximately 50 μm or less. The top edge 16 also has a maximum height of about 500 μm or less. The top edge 16 may be made smooth by, for example, a post-treatment such as polishing. Preferably, however, the paper making mold of the present invention produces a sufficiently smooth top edge 16, without a post treatment.

Hicks relates to a pulp molding apparatus. However, as admitted in the Office Action at page 5, Hicks fails to teach a roughness value for the inside and outside surfaces of the molded article. Additionally, Hicks fails to disclose or suggest that a top edge of the opening portion has a center-line average roughness of about 50 μm or less and a height of about 500 μm or less.

As noted above, these two features provide improved sealability of the pulp molded product. Because Hicks fails to disclose or suggest these two features, it is respectfully submitted that independent Claims 1 and 17 patentably distinguish over Hicks. Likewise, it is respectfully submitted that dependent Claims 2, 3, 13, 18, 19, and 32 patentably distinguish over Hicks for the reasons above-noted with regard to independent Claims 1 and 17. It is therefore respectfully requested that this rejection be withdrawn.

As for the rejection of Claims 1-3, 9, 13-19, 25-28, and 32 under 35 U.S.C. § 103(a) as unpatentable over Hicks in view of Stevens, this rejection is also traversed. As noted above, Hicks fails to disclose or suggest the limitations recited in Claims 1 and 17.

It is respectfully submitted that Stevens fails to remedy the defects above-noted with regard to Hicks. Stevens relates to a receptacle formed of molded fibers. However, like Hicks, Stevens fails to disclose or suggest the smoothness features recited in Claims 1 and 17. Specifically, Stevens does not disclose or suggest that a top edge of the opening portion has a center-line average roughness of 50 μm or less and a height of about 500 μm or less.

Consequently, as neither Hicks nor Stevens, either alone or as applied in combination by the outstanding Office Action, discloses or suggests the features recited in Claims 1 and 17, it is respectfully submitted that pending Claims 1-3, 9, 13-19, 25-28, and 32 patentably distinguish over Hicks and Stevens. It is therefore respectfully requested that this rejection be withdrawn.

Moreover, it is respectfully submitted that there is no basis in the teachings of either Stevens or Hicks to support the applied combination. Certainly, the Office Action fails to cite to any specific teachings in either of these references to support the proposed combination. It is therefore respectfully submitted that the applied combination of Stevens and Hicks is based solely upon hindsight reconstruction.

Regarding the rejection of Claims 4 and 20 under 35 U.S.C. § 103(a) as unpatentable over Hicks, alone or in combination with Stevens, and further in view of Kelley, this rejection is respectfully traversed. Claims 4 and 20 depend from Claims 1 and 17, respectively.

As noted above, neither Hicks nor Stevens, either alone or in combination, discloses or suggests the features recited in independent Claims 1 and 17. It is respectfully submitted that Kelley fails to remedy the defects above-noted with regard to Hicks and Stevens.

Kelley relates to a method of producing pulp-molded paper articles. However, Kelley does not in any way address the smoothness of the surface of the molded paper pulp particles. Kelley certainly does not disclose or suggest that a particular smoothness or height of a top edge of the opening portion would be beneficial.

Accordingly, as none of Hicks, Stevens, and Kelley discloses or suggests the features recited in independent Claims 1 and 17, it is respectfully submitted that dependent Claims 4 and 20 patentably distinguish over the combination of these three references. It is therefore respectfully requested that this rejection be withdrawn.

Additionally, it is respectfully submitted that the applied combination of Stevens, Hicks, and Kelley is based upon hindsight reconstruction. Specifically, the Office Action fails to point to any teachings in any of Stevens, Hicks, or Kelley to support the applied combination. It is therefore respectfully submitted that the applied combination of Stevens, Hicks, and Kelley is improper.

As for the rejection of Claims 5 and 21 under 35 U.S.C. § 103(a) as unpatentable over Hicks, alone or in combination with Stevens, and in view of Utsul, that rejection is traversed. Claims 5 and 21 depend from Claims 1 and 17, respectively.

As noted above, neither Hicks nor Stevens, either alone or in combination, discloses or suggests the claimed surface roughness and height of a top of an opening of the bottle. It is respectfully submitted that Utsul fails to remedy the deficiencies above-noted with regard to Hicks and Stevens.

Utsul describes that an irregular pattern is formed on the surface of the object as a result of molding using a wire net.¹ Additionally, Utsul describes that the mesh of the wire cannot be too fine, because the article will not properly form. Therefore, from this description, it is evident that Utsul teaches away from the Applicants' claimed limitation, because Utsul describes a purposefully created rough surface of the product.

Accordingly, as none of Hicks, Stevens, or Utsul discloses or suggests the limitations recited in Claims 1 and 17, it is respectfully submitted that Claims 5 and 21 patentably distinguishes over Hicks, Stevens, and Utsul, either alone or as applied in combination.

¹ Utsul, col. 3, lines 50-57.

Moreover, it is respectfully submitted that there is no basis in the teachings of any of Hicks, Stevens, or Utsul to support the proposed combination. Certainly, the Office Action fails to cite to any specific teachings in any of these three references to support the applied combination. It is therefore respectfully submitted that the combination of Hicks, Stevens, and Utsul is improper as based upon hindsight reconstruction.

With regard to the rejection of Claims 6-8 and 22-24 under 35 U.S.C. § 103(a) as unpatentable over Hicks, alone or in combination with Stevens, and further in view of Kakemura, this rejection is also traversed. Claims 6-8 and 22-24 depend from Claims 1 and 17, respectively.

As noted above, Hicks and Stevens, either alone or in combination, fail to disclose or suggest that a top edge of the opening portion of the bottle has a center-line average roughness of about 50 μm or less and a height of about 500 μm or less.

It is respectfully submitted that Kakemura fails to remedy the defects above-noted with respect to Hicks and Stevens. Kakemura relates to a compound container. The container described in Kakemura has an inner container of a plastic and an outer plastic of a paper.² However, Kakemura does not disclose or suggest any type of surface smoothness at all. Moreover, Kakemura does not disclose or suggest that a particular surface smoothness would be beneficial for the use of the product. Therefore, absent such a disclosure or teaching, it is respectfully submitted that Kakemura fails to disclose or suggest the limitations recited in Claims 1 and 17.

Consequently, as none of Hicks, Stevens, or Kakemura (either alone or in combination) discloses or suggests the features recited in Claims 1 and 17, it is respectfully submitted that dependent Claims 6-8 and 22-24 patentably distinguish over Hicks, Stevens, and Kakemura. It is therefore respectfully requested that this rejection be withdrawn.

As for the rejection of Claims 11 and 30 under 35 U.S.C. § 103(a) as unpatentable over Hicks, alone or in combination with Stevens, and further in view of Brennan, this rejection is traversed. Claims 11 and 30 depend from Claims 1 and 17, respectively.

Hicks and Stevens, as noted above, either alone or in combination, fail to disclose or suggest the limitations recited in Claims 1 and 17. It is respectfully submitted that Brennan fails to remedy the defects above-noted with regard to the applied combination of Hicks and Stevens.

Brennan relates to a method of molding preform. Brennan does not address in any manner the level of smoothness of the surfaces of the finished product. However, Brennan does describe that molding is performed using a wire net, which implies the creation of a rough surface. Consequently, it is evident that Brennan fails to disclose or suggest that a top edge of the opening portion has a center-line average roughness of about 50 μm or less and a height of about 500 μm or less.

Therefore, as none of Stevens, Hicks, or Brennan discloses or suggests the features recited in Claims 1 and 17, it is respectfully submitted that dependent Claims 11 and 30 patentably distinguish over the combination of these three references. It is therefore respectfully requested that this rejection be withdrawn.

With regard to the rejection of Claims 10 and 29 under 35 U.S.C. § 103(a) as unpatentable over Hicks, alone or in combination with Stevens, and further in view of Mitchell, that rejection is also traversed. Claims 10 and 29 depend from Claims 1 and 17, respectively.

As noted above, neither Hicks nor Stevens, either alone or in combination, discloses or suggests the features of Claims 1 and 17. Applicants respectfully submit that Mitchell fails to remedy the defects above-described with regard to the combination of Hicks and Stevens.

² Kakemura, Abstract.

Mitchell relates to a multi-ply paper including a mixture of cellulose fibers. Mitchell describes that a softness of the multi-ply paper structure may be controlled by the composition of the multi-ply mixture.³ However, Mitchell does not disclose or suggest any type of surface smoothness characteristics of the multi-ply paper structure. Certainly, Mitchell fails to disclose or suggest that a top edge of the opening portion of the bottle has a center-line average roughness of about 50 μm or less and a height of about 500 μm or less.

Therefore, as none of Hicks, Stevens, or Mitchell discloses or suggests the features recited in Claims 1 and 17, it is respectfully submitted that Claims 10 and 29 patentably distinguish over the combination of these three references. It is respectfully requested that this rejection be withdrawn.

Finally, with regard to the rejection of Claims 12 and 31 under 35 U.S.C. § 103(a) as unpatentable over Hicks in view of Mitchell, and further in view of Brennan, this rejection is also traversed. Claims 12 and 31 depend from Claims 1 and 17, respectively.

As noted above, none of Hicks, Mitchell, or Brennan discloses or suggests the features recited in independent Claims 1 and 17. It is therefore respectfully submitted that Claims 12 and 31 patentably distinguish over Mitchell, Brennan, or Hicks (either alone or in combination), and it is respectfully requested that this rejection be withdrawn.

³ See, e.g., Mitchell, Abstract.

Consequently, in view of the foregoing discussion and present amendments, it is respectfully submitted that this application is in condition for allowance. An early and favorable action is therefore respectfully requested.

Respectfully Submitted,

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A handwritten signature in black ink, appearing to read 'J. Derek Mason', written over a horizontal line.

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